

**NHS Golden Jubilee**

# **Climate Emergency and Sustainability Report**

**2022/23**

A watercolor illustration of a landscape. In the foreground, there are rolling green hills. Two trees with rounded, bushy tops stand on a small rise. The background shows more distant, lighter green hills under a pale, yellowish sky. The overall style is soft and painterly, using various shades of green and yellow.

## At a glance



### Greenhouse gases

- Reduced consumption in all areas
- Reduced consumption of anesthetic and surgical greenhouse gases

### Building energy

- Working in partnership with West Dunbartonshire Council on the district heating system.
- Looking into other renewable technologies and upgrades to help us reduce our total energy use.

### Climate Change Adaptation

- Moved to the full Climate Change Risk Assessment and adaptation plan.

### National Sustainability Assessment Tool

- Moved to the full Climate Change Risk Assessment and adaptation plan.

### Leadership and Governance

- New governance structure to ensure a coordinated approach to strategy development and implementation.
- New Non-Executive Sustainability Champion provides visibility at the highest level.
- Director of Transformation, Strategy, Planning and Performance responsible for climate change and sustainability programmes.
- New Climate Change and Sustainability Strategic Group oversees delivery of the strategic programme.

## Introduction

This is NHS Golden Jubilee's second annual Climate Emergency and Sustainability Report.



Within the first report we reflected on how the planet is facing a triple crisis of climate change, biodiversity loss and pollution as a result of human activities breaking the planet's environmental limits. The risks and challenges continue at a local, national and global level.

We previously referenced that the World Health Organization (WHO) recognises that climate change is the single biggest health threat facing humanity. One year on, WHO is now reporting that climate change is directly contributing to humanitarian emergencies from heatwaves, wildfires, floods, tropical storms and hurricanes, all of which are on the increase. More information on the challenges and threats posed by climate change can be found in the following link:



<https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

NHS Golden Jubilee (NHS GJ) is home to major centres' for orthopaedics, ophthalmology, diagnostic imaging and general surgery, and also provides specialist regional and national heart and lung services.

In addition, we also host the NHS Scotland Academy (alongside NHS Education for Scotland) and the National Centre for Sustainable Delivery. The Golden Jubilee family also includes the Golden Jubilee Research Institute and Golden Jubilee Conference Hotel.

Our Centre for Sustainable Delivery has been commissioned to lead the National Green Theatres Programme – a key element of the [Scottish Government’s Climate Emergency and Sustainability Strategy 2022 – 2026](#). Theatres are high carbon and energy intensive areas that produce high volumes of waste. NHS Scotland will benefit greatly from reducing the environmental impact of theatres. By introducing achievable actions we will:

- Save costs or become cost neutral.
- Improve patient experience.
- Improve staff experience.

The organisation continues to grow from its inception and will continue to develop new ways to deliver services to benefit the NHS in Scotland, as well as acting as an anchor institution by developing long term sustainable ties to the wellbeing of the local and national populations we serve.

As reported last year, NHS Golden Jubilee has grown considerably since it was established in terms of the scope and range of services provided on our Hospital site. The workforce has grown significantly as illustrated in Figure 1 below with a 26% increase in headcount between 2015 and 2022. The number of procedures undertaken and patients served per annum has also increased significantly as illustrated in Figure 2 with a 200% increase in the number of procedures delivered per year. In addition to the growth illustrated below, we will continue increase the scope and range of services provided through the built environment which will increase the headcount in future reports. This trend is projected until 2025, beyond which substantial change is both unlikely and less predictable.

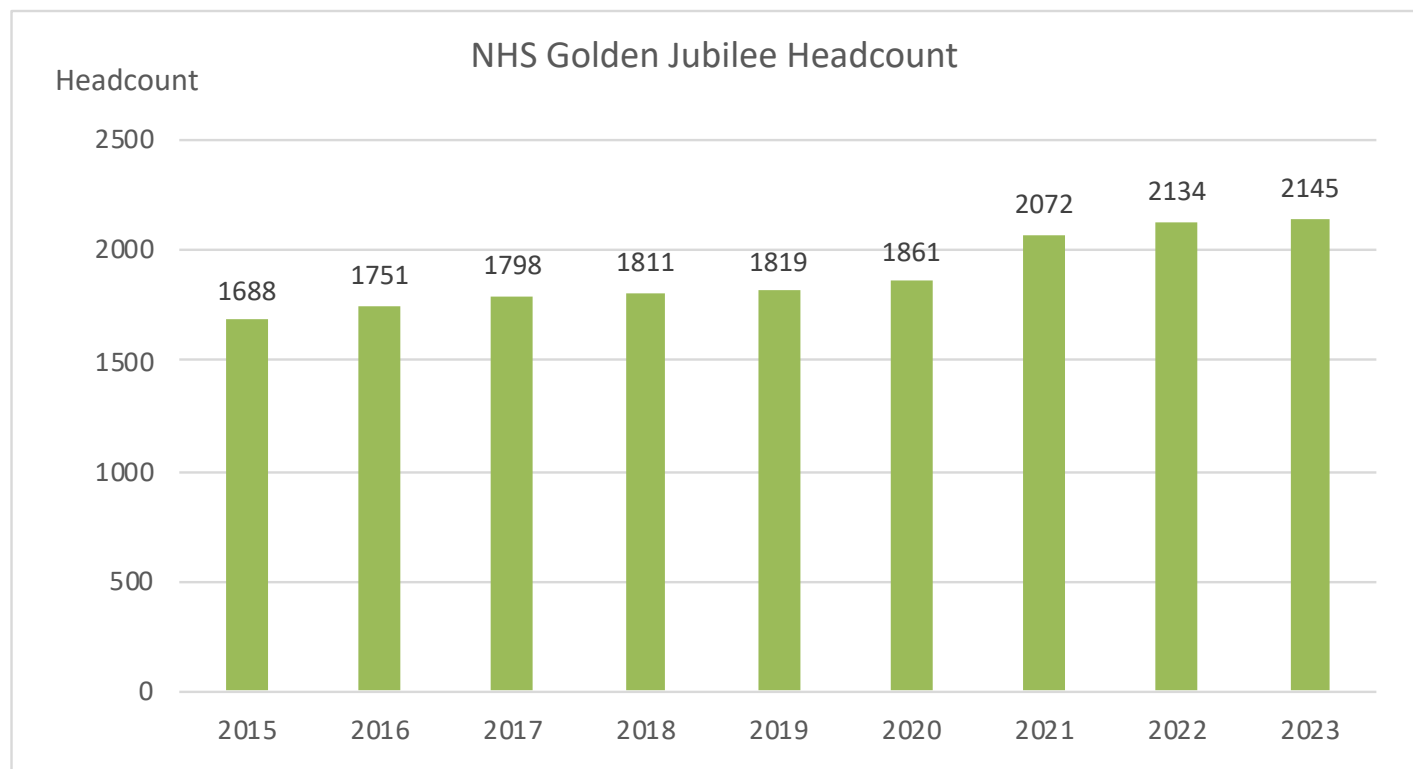
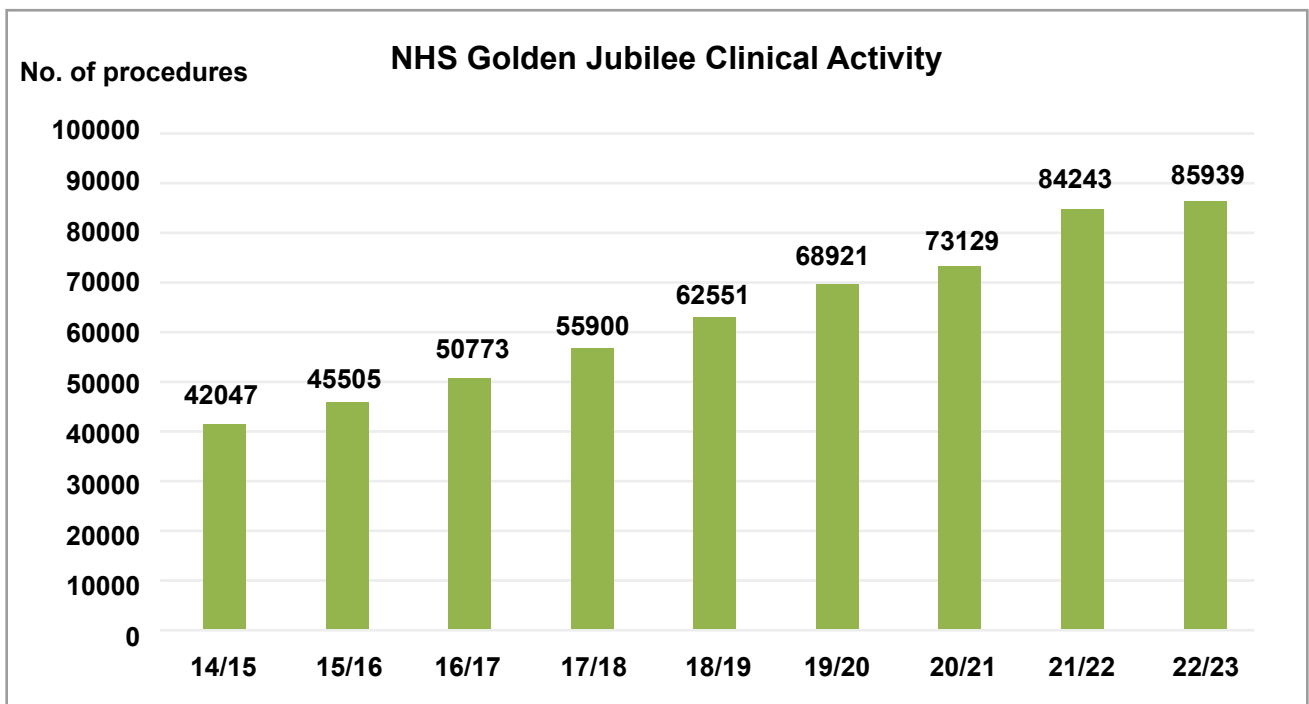


Figure 1: Workforce Growth

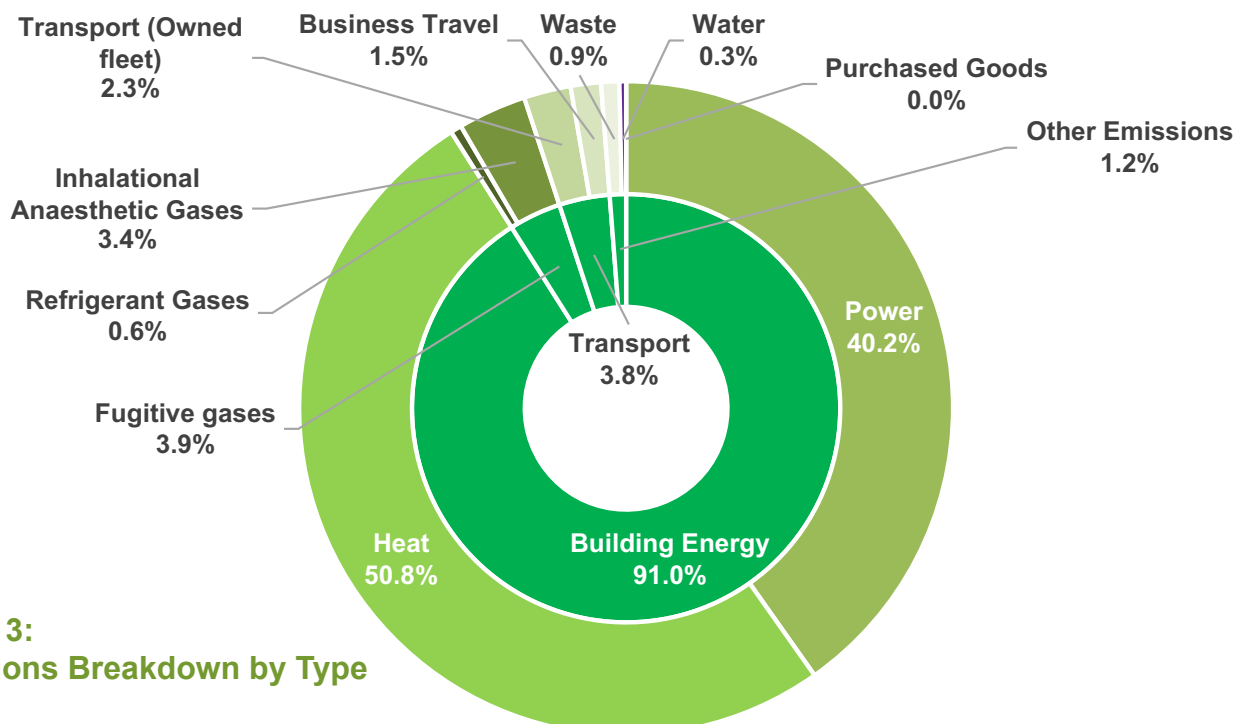


**Figure 2: Activity Growth**

This organisational growth is important context for benchmarking and annual measurement of greenhouse gas emissions as the impact of schemes to reduce the contribution of different sources of GHGs may be masked by growth in use of these sources.

The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 requires Scotland to reduce GHGs to Net Zero by 2040, with an interim reduction target of 75% against 1990 levels by 2030.

Figure 3 below displays a breakdown of emissions by type. The chart shows that heat and electrical power supplied to the built environment contribute most emissions at 91%.



**Figure 3: Emissions Breakdown by Type**

As previously reported, 2 key examples of growth impacting on the use of resources are the opening of the new Eye Centre in 2020 and the future opening of our Surgical Centre-expected in 2024. This is a significant capital building programme which increases the resource consumption of the organisation.

The design and building of these facilities has been undertaken in line with guidance on sustainable building design to minimise their environmental impact including ongoing resource consumption. However, we expect there will be additional greenhouse gas emissions resulting from the increased activity associated with these new facilities that will need to be mitigated and reduced as far as possible through our sustainability strategic action plan. This includes moving to renewable energy sources to provide heat and power for these facilities, as well as introducing low energy initiatives and set back/turn off protocols within all areas of the organisation.

## Leadership and governance



The leadership responsibilities for sustainability across NHS Golden Jubilee have been developed further since reporting last year.

- Callum Blackburn, Non-Executive Director, is the Sustainability Champion for the Board.
- Carole Anderson, Director of Transformation, Strategy, Planning and Performance is the Executive Lead.

The strategic direction for sustainability was agreed at a recent board seminar and our executive lead will progress development of a strategic action plan setting out in detail the roadmap for NHS Golden Jubilee to achieve the ambitions and goals of the NHS Scotland climate emergency and sustainability strategy 2022-2026.

A governance structure is in place to ensure a coordinated the implementation of NHS Golden Jubilee Sustainability and Climate Change objectives as part of the Sustainable and Climate Change Strategy.

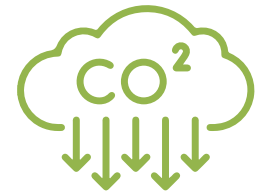
To promote:

- A sustainable healthcare environment and the delivery of greener models of healthcare for the benefit of staff, patients and other stakeholders and to plan promote and undertake practical and organisational initiatives.
- Greater staff and public involvement in the environment and sustainability of NHS GJ, to act as a point of contact for staff and patients who wish to improve our environment and develop communication with internal and external organisations; and
- To advise NHS GJ on developments which have an impact on our external environment and measures to mitigate any impact, and to challenge potentially environmentally harmful proposals.

Our strategic action plan will be delivered through the established Climate Change and Sustainability Strategic Group. This group will be supported on the delivery of our aims through a number of programme teams with specific responsibilities in:

- Energy and Waste Conservation;
- Sustainable Health and Care Development;
- Sustainable Transport and Travel;
- Sustainable Procurement; and
- Green Theatres Programme.

# Greenhouse gas emissions



NHS Golden Jubilee aims to become a net-zero organisation by 2040 for the sources of greenhouse gas emissions set out in the table below. The table shows the amount of greenhouse gas produced annually by NHS Golden Jubilee.

Source	Description	Amount of greenhouse gas (tonnes of CO2 equivalent)				% change since 2019/20
		2019/20	2020/21	2021/22	2022/23	2021/22
Building energy use	Greenhouse gases produced in providing electricity and energy heat for NHS buildings.	7662	6971	6559	7139	-7%
Non-medical F- gas use	Greenhouse gases used for things like refrigeration and air conditioning.	Not available	52	52	Not available	N/A
Medical gases	Greenhouse gases used in anaesthetics - nitrous oxide (N2O), Entonox (which contains nitrous oxide), desflurane, sevoflurane and isoflurane.	215	334	113	Not available	-47%
Metered dose inhaler propellant	Greenhouse gases used as a propellant in inhalers used to treat asthma and chronic obstructive pulmonary disorder (COPD).	Not available	Not available	Not available	Not available	N/A
NHS fleet use	Greenhouse gases produced by NHS vehicles.	Not available	Not available	53	53	N/A
Waste	The greenhouse gases produced by the disposal and treatment of waste produced by the NHS.	Not available	220	213	177	N/A
Water	The greenhouse gas produced from the use of water and the treatment of waste water.	Not available	31	30	28	N/A
Business travel	Greenhouse gases produced by staff travel for work purposes, not using NHS vehicles.	Not available	141	137	50	N/A
Carbon sequestration	The amount of carbon dioxide captured per by woodland, trees, grassland and shrubs growing on NHS grounds.	Not available	Not available	Not available	Not available	N/A
Greenhouse gas emissions minus carbon sequestration		Not available	Not available	Not available	Not available	N/A

Note - increase in greenhouse gases can be attributed to the increase in activity and Gross Internal Area (GIA)

Figure 4: Greenhouse gas production

## National sustainability assessment

NHS Scotland has developed a National Sustainability Assessment Tool (NSAT) which all NHS Boards use on an annual basis to measure their progress across 16 different areas of sustainability.



In 2021/22, NHS Golden Jubilee scored below 40% overall. Our 3 highest scoring areas were Procurement, Capital Projects and Waste. This reflects our significant building programme and application of sustainable design principles in the 2 new building developments on our site. We have also updated our procurement strategy and have been working on improved waste management.

The NSAT system is currently being reviewed through a national review group, and NHS Golden Jubilee remains committed to providing assurance and progress reports through future NSAT returns when the system is available for use.

## Climate change adaptation

The climate is changing due to the greenhouse gases already emitted into the atmosphere. While efforts to reduce the rate and scale of climate change continue, we must also adapt to new conditions we are facing.



The Climate Change (Scotland) Act 2009 set minimum standards for NHS resilience to climate change and is a legal requirement for NHS Scotland.

“The NHS Board shall develop a robust approach towards implementing a range of actions to ensure to continuity of quality healthcare services before, during and after extreme weather events”

In response to the requirements set out in the above act our previous report highlighted the work done to assess flood risks and actions taken to mitigate the impact of flooding. Further to this NHS Golden Jubilee has completed a Climate Change risk assessment using the Climate Change Risk Assessment and Adaptation Planning Tool developed by NHS Scotland Assure.

The climate change risks were widened from the initial flood risk assessment to include:

- Flooding (Rivers, surface water, sea levels);
- Combined Climatic effects (storms, high winds, lightning, fog);
- Cold spells (Snow, Ice);
- Heavy downpours;
- Higher than average temperatures and extended periods of hot weather; and
- Extended periods of dry weather and drought.

Our assessment considers:

- potential impacts to access; and
- potential impacts on our ability to maintain the built environment.

This will remain a dynamic document to inform climate change decision making.



## Building energy

NHS Golden Jubilee aims to use renewable heat sources for all buildings by 2038. Proposals are progressing to join Phase 4 of the Queens Quay district heating system, being developed by West Dunbartonshire Council. The district heating network is powered by a heat pump, using the River Clyde as a low-grade heat source.



Work is progressing on a business case to support this proposal and NHS Golden Jubilee continues to work closely on this with West Dunbartonshire Council and the Scottish Government.

NHS Golden Jubilee will continue to consider alternative renewable options as part of the business case process.

NHS Golden Jubilee has a single building within a single site. We realise, if successful, this unique District Heating opportunity could be a motivational case study for other major hospital sites in other boards.

The NHS Golden Jubilee expansion programme is structured in 2 phases as follows:

- Phase 1 Eye Centre – delivery of additional Ophthalmology elective care capacity
- Phase 2 Surgical Centre – delivery of additional Orthopaedic and other surgical elective care capacity

It should be noted that the new Eye Centre became operational in 2020/2021. This facility includes an outpatient suite and 6 purpose- built ophthalmic surgery theatres to provide a maximum capacity of approximately 18,000 cataract procedures per year. As noted in the introduction this represents a planned step increase in resource consumption and this needs to be taken into account when considering the increased energy use reported.

Our Phase 2 Surgical Centre is a new build accommodation and refurbishment of existing NHS Golden Jubilee facilities to provide additional activity within orthopaedics, general surgery and diagnostic endoscopy. This is due to start treating patients during 2024.

NHS Golden Jubilee number of procedures (activity) rose from 84243 in 2021/22 to 85939 in 2022/23 which equates to a 1.96% increase in activity. In addition, the workforce headcount increased from 2074 to 2134 over the same period, which equates to a 2.81% increase. In 2022/23, NHS Golden Jubilee used 35,381,920 kWh of energy. This was an increase of 18% from the year before.

In 2022/23, NHS Golden Jubilee did not generate any energy from renewable technologies. We will be exploring the opportunities for energy generation from onsite renewable technologies including solar panels and small scale wind turbines; in addition to the Queen's Quay project.

In 2022/23, 7,139 tonnes of CO2 equivalent were produced by NHS Golden Jubilee's use of energy for buildings. This was an increase of 9% from the year before. As noted above our energy use has increased as has our CO2 equivalent in part due to the Hospital Expansion Programme detailed earlier.



This year, to reduce emissions from building energy use, we will continue with the air handling unit upgrade programme and commence a replacement programme for the chiller units serving the site. This consists of the removal of the centrifugal belt driven fans and the installation of direct-drive Electronically Commutated (EC) fans which are more energy efficient.

Further work is required to review energy efficiency measures for our main existing building, which is now approaching 30 years of age. Planned routine replacement and upgrading offers an opportunity to procure more energy-efficient plant and equipment. We will continue to ensure we are improving energy efficiency as opportunities arise naturally through routine replacement. However, we need to explore opportunities for investing in additional measures to improve energy efficiency which may include:

- Building management systems that enable better zonal control of heating and ventilation to avoid using energy to heat or cool parts of the building at times when they are not being used.
- Building fabric upgrades including insulation and window replacement to reduce heat loss from the building

Further measures to improve building energy use will require capital investment and we will work with Scottish Government and other funding sources such as grant-giving bodies to try and secure capital investment. The success of energy reducing initiatives can in part be attributed to behaviors, however will require this essential funding to make necessary building infrastructure changes. NHS Golden Jubilee has been made aware the capital funded projects will be limited over the next few years, and as such, may have an impact on our ability to reduce energy in a meaningful way.

## Sustainable care

The way we provide care influences our environmental impact and greenhouse gas emissions. NHS Scotland has 3 national priority areas for making care more sustainable:

- anaesthesia;
- surgery; and
- respiratory medicine.



## Anaesthesia and surgery

Greenhouse gases are used as anaesthetics and pain killers. These gases are nitrous oxide (laughing gas), Entonox (which contains nitrous oxide) and the “volatile gases” - desflurane, sevoflurane and isoflurane.

NHS Golden Jubilee is continually reviewing data and updating systems to give accurate data outputs; and on this basis the above table has been recast with the data generated from our current and more advanced systems.



<b>Anaesthetic gas use</b>						
<b>Volatile gases</b>	<b>2018/19 tCO<sub>2</sub>e (baseline)</b>	<b>2019/20 tCO<sub>2</sub>e</b>	<b>2020/21 tCO<sub>2</sub>e</b>	<b>2021/22 tCO<sub>2</sub>e</b>	<b>2022/23 tCO<sub>2</sub>e</b>	<b>Percentage change since 2018/19</b>
Desflurane	5.4	0.1	6.3	5.4	1.7	-68.1%
Isoflurane	37.2	34.5	30.0	29.0	33.1	-11.0%
Sevoflurane	12.4	10.3	8.2	12.0	13.0	+4.9%
<b>Volatile gas total</b>	<b>55</b>	<b>44.9</b>	<b>44.5</b>	<b>46.4</b>	<b>47.8</b>	<b>-12.9%</b>

**Figure 5: Recast Greenhouse Gas Production**

In addition to the above NHS Golden Jubilee are upgrading systems and introducing continuous improvements to reduce the following, as such the base line data has been retained and will be updated in future reports.

<b>Anaesthetic gas use</b>			
<b>Source</b>	<b>2018/19 (baseline year) tCO<sub>2</sub>e</b>	<b>2021/22 tCO<sub>2</sub>e</b>	<b>Percentage change since 2018/19</b>
Nitrous oxide and Entonox			
Piped Nitrous oxide	N/A	N/A	N/A
Portable Nitrous oxide	6	N/A	N/A
Piped Entonox	N/A	N/A	
Portable Entonox	12	25	+108%
<b>Nitrous oxide and Entonox total</b>	<b>18</b>	<b>25</b>	<b>+38%</b>

**Figure 6: Baseline greenhouse gas production**

NHS Golden Jubilee has been a leader in the field of Total Intra-Venous Anaesthesia (TIVA) which contributes to avoiding the use of volatile gases. Work has been continuing over the last year to further reduce emissions from anaesthetic gases by maximising the opportunities to use TIVA in our surgical procedures

We do not use piped nitrous oxide which eliminates the risk of avoidable emissions through leakage from a piped network. We have also eliminated portable nitrous oxide but this appears to have been offset by an increased use of portable Entonox.

This year to further reduce emissions from anaesthetic gases we are maintaining staff awareness and working to keep usage low as well as promoting the use of TIVA.

To make surgery greener we are considering the following measures:

- Nitrous oxide manifold decommissioning.
- HVAC (Heating, Ventilation and Air Conditioning system) and AGSS (Anaesthetic Gas Scavenging System): We will work with the theatres teams and Estates to reduce the electricity and carbon footprint in a way that is clinically satisfactory.
- Neptune Suction: the system we are using at the moment is less efficient than Neptune suction for filtering fumes. The Neptune Waste Management System has not been used to date due to additional costs associated with consumables and the recommended disinfectant cleaner. New products are coming on market and being tested and if possible GJNUH will take part in a pilot and/or link in with CFSD and other boards to determine the most appropriate – cost efficient and sustainable water disposal system.
- Waste segregation: at the moment we are using orange waste bags in all the clinical areas, and recycling collections only at the storage rooms level. This issue has been discussed previously, and will be reviewed again this year to determine whether recycling collections can be expanded.
- Use of oral Paracetamol instead of intravenous.

## Respiratory medicine

Greenhouse gases are used as a propellant in metered dose inhalers used to treat asthma and COPD. Most of the emissions from inhalers are from the use of reliever inhalers – Short Acting Beta Agonists (SABAs). By helping people to manage their condition more effectively, we can improve patient care and reduce emissions. There are also more environmentally friendly inhalers such as dry powder inhalers which can be used where clinically appropriate. We estimate that emissions from inhalers in NHS Golden Jubilee were 4.99 tonnes of CO<sub>2</sub> equivalent.



This year to improve patient care and reduce emissions from inhalers we will encourage patients to bring their own prescription medicines, including inhalers, so we are not adding to the carbon burden by prescribing something they have at home. Due to the nature of our services we rarely start inhaler therapy and in fact only prescribe them when someone has forgotten to bring them in as part of their own prescription medicines. In addition we will encourage staff to use the type that are not pre-metered dose inhalers, which is better for the environment and interchangeable in the majority of patients. In general we will raise awareness when dispensing them about not over-ordering when they get home, and recycling them at their local pharmacy where available.

## Travel and transport

Through our governance processes, we have a Sustainable Travel and Transport Group that reports to our Climate Change and Sustainability Strategic Group.

The Travel and Transport Sub Group purpose is to support a realistic shift in staff, patient and visitor travel behaviour away from single occupancy car travel to sustainable travel and alternatives such as walking or cycling.



The objectives of the group are to:

- maximise the proportion of walking, cycling and public transport trips to and from the site;
- increase awareness of the sustainable travel options, available to both staff and visitors by emphasising health and wellbeing benefits;
- reduce reliance on the private car as a means of accessing the site;
- reduce the number of single occupancy car trips to our site by 5%.



The purpose of the group is to provide coordination and leadership, ensuring cycling is promoted and appropriate infrastructure and resources are made available.

To create an action plan and coordinate actions through existing groups/committees where appropriate to ensure delivery

Initiatives will be considered and coordinated through this group in a strategic and structured way, including but not limited to:

- Continuing to develop staff benefits for accessing public transport including season ticket loans;
- Working with West Dunbartonshire Council to progress sustainable access plan including improved routes to and from the site for rail and bus transport;
- Developing a plan and milestones for carbon neutral patient transport and other fleet vehicles;
- Developing a site masterplan proposal for electric vehicle charging infrastructure;
- Re-introducing and promoting 'liftshare' car sharing scheme.

Domestic transport (not including international aviation and shipping) produced 24% of Scotland's greenhouse gas emissions in 2020. Car travel is the type of travel which contributes most to those emissions.

NHS Scotland is supporting a shift to a healthier and more sustainable transport system where active travel and public transport are prioritised.

In the last year we have continued to work to reduce the need to travel by continuing to make use of MS Teams for meetings and hybrid working for staff in appropriate categories.

In the last year, to improve public and community transport links to the NHS Golden Jubilee site in conjunction with West Dunbartonshire Council we undertook the first stage of a Sustainable Access Appraisal (SAA). The overall aim of the study was to identify and progress sustainable access improvements to the site from the Clydebank area and beyond through the delivery of safer and more direct walking and cycling routes and improved connections to public transport services. The following recommendations from the appraisal will be taken forwards for consideration with partners including the council:

- New pedestrian footpath link to Caledonia Street;
- Improved wayfinding from Dalmuir Train Station; and
- Upgraded bus stop infrastructure on Dumbarton Road.



This year to reduce the need to travel, in addition to the use of MS Teams and hybrid working, we will relaunch the Liftshare scheme for staff with dedicated parking provided for those joining the scheme and sharing car journeys. This was launched in 2020 but was impacted by the Covid pandemic measures.

We have had a successful cycle to work scheme for a number of years and we will continue to promote the scheme with staff to support active travel. We also installed improved cycle storage facilities and a maintenance stand in 2020.



To improve public and community transport links to the NHS Golden Jubilee site, we will progress with the second stage of the Sustainable Access Appraisal (SAA) which requires the production of a specification brief for a feasibility and design study to encourage sustainable travel choices through enhanced active and sustainable transport infrastructure.

NHS Golden Jubilee have an ambition to remove all petrol and diesel fueled cars from our fleet by 2025. The following table sets out how many renewable powered and fossil fuel vehicles were in NHS Golden Jubilee fleet at the end of March 2022.

One function of the fleet we have is to provide patient transport for patients attending from other NHS Boards from across Scotland. We will review the options available for renewable powered vehicles that are suitable for providing patient transport and operating over significant distances.

	Renewable powered vehicles	Fossil fuel vehicles	Total vehicles	Percentage renewable powered vehicles
Cars	0	0	0	0
Light commercial vehicles	0	3	3	0
Heavy vehicles	0	0	0	0

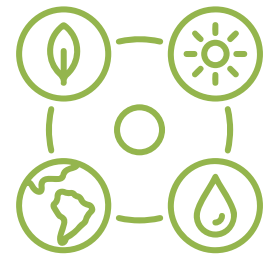
**Figure 7: NHS Golden Jubilee Fleet (patient transport)**

The table above contains figures relating to patient related NHS Golden Jubilee transport only

As NHS Golden Jubilee is a single site organisation there is limited requirement for staff to travel offsite. Most, if not all, staff travel relates to business meetings not within a feasible cycling distance. In addition we have progressed use of MS teams to reduce the need for business travel so there is likely to be limited opportunity for developing a cycle fleet.



# Greenspace and Biodiversity



Scottish Government DL (2021) 38 A Policy for NHS Scotland on the Climate Emergency and Sustainable Development - DL (2021) 38 outlines the following:

- It is the duty of each NHS Scotland body in exercising its functions to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions.
- All NHS Scotland bodies must assess, and then take action to improve:
  - the extent and quality of the greenspace they have;
  - the contribution its estate makes to biodiversity; and
  - the value of the ecosystem services its greenspaces provide.
- Greenspace can have benefits for the health and wellbeing of staff, patients and communities.
- Greenspace can have benefits in relation to climate change mitigation and adaptation through, for example, reducing flooding and absorbing heat.

NHS Golden Jubilee has considered the advantages of applying the requirements above:

- Space for nature;
- Green space accessed by local communities;
- Sports and recreation;
- Climate adaptation and mitigation;
- Active travel;
- Surface water management;
- Therapeutic uses;
- Staff relaxation; and
- Patient relaxation.

NHS Golden Jubilee continue to develop new initiatives to support sustainability and biodiversity through the Climate Change and Sustainability Strategic Group governance structure. In addition to local governance NHS Golden Jubilee are also represented through a number of national groups and this ensures our local, community and national approach.

Pending funding approval NHS Golden Jubilee have developed our Site Master Plan in relation to hard and soft landscaping and pedestrian, vehicular and cycle access, including routes on and through the site. We will continue to work with West Dunbartonshire Council and our local community to support their sustainability priorities including developing our greenspace and its biodiversity for the benefit of our staff and our local citizens.

NHS Golden Jubilee also continues to develop initiatives such as 'Trees for Life' and plant 1 tree as hotel guests opt out of room cleaning services, reducing resource consumption, carbon emissions and increasing carbon sequestration. Conference facility users are also offered opportunity to donate to the Hotel's 'Grove' fund with 1 tree planted for each donation.

In addition to health benefits for patients and staff, investment in greenspace around hospitals and healthcare centres helps tackle climate change and biodiversity loss.

This year to improve our greenspace and biodiversity we will further develop the Site Master Plan, particularly in relation to further opportunities to enhance the flora on site as the majority of the greenspace site is currently grass lawns with some trees. This will require further advice and exploration to determine the best planting strategies to combat the exposed nature of the site in terms of wind and weather and enhance the biodiversity.

We have plans that will enhance the greenspace and biodiversity of the site with clear benefits to our staff and the community. However, these plans require capital investment to enhance the greenspace. Some aspects will also require engagement with the local authority if statutory approvals are required.

## **Sustainable procurement, circular economy and waste**

We aim to reduce the impact that our use of resources has on the environment through adopting circular economy principles, fostering a culture of stewardship and working with other UK health services to maximise our contribution to reducing supply chain emissions to net-zero by 2040.



Last year to improve the environmental impact of the goods and services we buy we have now introduced new areas of consideration (if relevant and appropriate) as part of our Procurement Tender Strategy and associated documentation, including:

- Delivery Aspects such as packaging and transportation.
- Sustainability Test which includes life cycle impact mapping of obtaining raw materials, manufacturing and logistics, during use of product/service, end of life/disposal.
- Climate and Circular Economy Considerations such as; whether/what to buy? (re-use, refurbish, repair), how to buy? (suppliers helping to achieve balance of economic, social and environmental outcomes).
- Supplier certification of ISO 9001, ISO 14001.
- Supplier agreement to support in delivering the Climate Change (Scotland) Act.

Weighted evaluation criteria on Community Benefits and Fair Work First Practice is also considered. These factors are discussed and monitored via key supplier meetings. Members of the procurement team have completed the Scottish Government Sustainable Procurement modules and workshops such as:

- Climate Literacy for Procurers module;
- Circular Procurement and Supply module; and
- Sustainable Procurement Tools workshop.

Our hotel has reviewed its product range and eliminated single use plastic from its bedrooms and gone paperless by introducing an online guest services app. In addition the hotel has a comprehensive waste segregation system in place across the whole facility.

We want to reduce the amount of waste we produce and increase how much of it is recycled. The table below provides information on the type of waste we produce.

Type	2020/21 (tonnes)	2021/22 (tonnes)	Percentage change
Waste to landfill	242.97	262	+7.8%
Waste to incineration	N/A	N/A	N/A
Recycled waste	50.62	57	+12.5%
Food waste	12.34	17	+38%
Clinical waste	279.80	342	+22%

**Figure 8: Waste by type**

In recent years to reduce our waste we undertook a programme of staff training on segregation of waste.

As noted in previous sections, our increased activity including that associated with the new theatre expansion will be contributing to increases in clinical waste. However, we must continue to strive for high levels of recycling within our waste segregation systems and processes.

This year to reduce our waste we will continue with staff training on the segregation of waste. We will also review the design of the waste segregation systems and processes to make it as easy as possible for staff, visitors and patients to segregate waste at source. This will include reviewing the layout and labelling of bins and waste stations for clinical, domestic and food waste streams.

In the next year, NHS Golden Jubilee will have an obligation to publish a new 3 year procurement strategy which must include how procurement will impact in terms of climate, sustainability and community benefit. This will be followed by an annual progress report. Additionally, procurement Key Performance Indicators will be monitored as part of the NHS Golden Jubilee Anchor Strategy – these will focus on community benefit.

NHS Golden Jubilee have recently established a waste management group (operational) and waste and energy group. The purposes of these groups will be to focus on specific actions in line with the Climate Emergency and Sustainability Strategy for Scotland. The group will establish a very specific action plan for the Board, taking guidance from national documents such as SHTN0301 and the Waste Management Action Plan which is due to be revised for this incoming year.

Currently the Board is focusing on waste reduction and segregation, and in particular segregation of clinical waste. It was recognised that approximately 33% of waste deposited in orange clinical waste bags is not actual clinical waste. Therefore, NHS Golden Jubilee, working alongside clinical colleagues and infection control, will progress this, and work to develop recycling stations in these areas.

NHS Golden Jubilee is also fully engaged with the Green Theatres programme within which it is recognised that there are potentially large gains, both environmentally and financially to be gained from the segregation of theatre waste, with a particular view to ensuring that only clinical waste is dealt with through that waste stream. Training and Education have been identified as a key requirement on site, and NHS Golden Jubilee have engaged with the Sustainability Manager at NHS Assure to provide general overview training to clinical and non-clinical staff.



More sessions are planned in the future to take advantage of the e-learning module which is in development to cover this area.

The new non-domestic waste contract is currently going through the tender process. NHS Golden Jubilee recognises that there is wider opportunity within this contract in terms of waste segregation and are particularly interested in the identification of a high grade non-infectious plastic. We will look to engage with contractors who are able to accept this waste, recognising the importance the volume of material currently going through waste streams.

NHS Golden Jubilee is also working on a review and development of a new food waste policy and will work alongside the Catering Expert Services Group on this, as well as NHS Assure, Scottish Government and Zero Waste Scotland. There are a number of new innovations on the market with regards to food ordering and disposal options which we will investigate in the coming months. The focus, however, will be on food waste reduction and engagement with clinical teams and ward staff on menu review and ordering processes.

Where possible, NHS Golden Jubilee will engage with Commodity Advisory Panels about encouraging sustainable procurement and recognising the ask of the national group for environmental input within these areas. We are keen to be involved in potential projects looking at circular solutions, addressing the way in which goods and services are procured and managed, whilst appreciating that much of this work is national and sits within the wider Circular Economy Procurement Programme.

The NHS Golden Jubilee has recently commissioned a new Central Sterile Processing Department (CSPD) and are aware that this is a current area of focus, recognising the pressure linked to the continued use of single use medical devices (the material management within these and also potential issues with regards to scarcity of raw materials and issue with supply chain). We see these areas as critical going forward and will work alongside various projects to encourage and develop alternative solutions and change the thinking on the way we operate in the future. We need to do this to address scope 3 emissions, which are emissions as a result of activities from assets not owned or controlled by NHS Golden Jubilee.

## Environmental stewardship

Environmental stewardship means acting as a steward, or caretaker, of the environment and taking responsibility for the actions which affect our shared environmental quality. This includes any activities which may adversely impact on land, air and water, either through the unsustainable use of resources or the generation of waste and pollution. Having an Environmental Management System (EMS) in place provides a framework that helps to achieve our environmental goals through consistent review, evaluation, and improvement of our environmental performance.



The actions set out in this document form the main basis of our overall approach to environmental stewardship. An EMS will enhance our ability to monitor, measure and improve our environmental stewardship. We have recruited a dedicated Manager for environmental stewardship and sustainability to help implement measures and manage our reporting and performance towards the 2040 target.

# Sustainable construction



Where there is a need for new healthcare facilities, we want both the buildings and grounds to be safe, nature-rich, sustainable, resilient and accessible.

NHS Golden Jubilee is working on the following building projects:

- Hospital Expansion Programme Phase 2 – Surgical Centre.
- Hospital Expansion Programme Phase 2 – Work Task Orders.

We continue to work with construction partners to make our major construction projects more environmentally sustainable. To that end we have ensured the following with contractors:-

- Take back schemes (floor protection, PPE, plasterboard) to recycle more construction materials.
- Changed their use of diesel to HVO (Hydrogenated vegetable oil) in all of site plant.
- Introduction of Biodigester remediate to deal with any potential construction spills (eco-friendly aerobic biodigester).
- On site catering providers have moved to biodegradable packaging.

To make our construction projects more environmentally sustainable (in addition to the above) our contractors are:

- In discussions with cabin suppliers with a view to changing to waterless urinals to reduce water usage.
- Installing a “last man out” switch that will automatically shut off all power to non- essential items such as photocopiers, printers etc.
- Trailing “palletloop” recycling of pallets.
- Changed site access from card to facial recognition to save use of plastic cards.

For smaller projects, we utilise the national Minor Works Framework where contractors are required to deliver on the 3 pillars of sustainability, which are Economic, Environmental and Social.

Contractors achieve this by exclusively using locally based SME subcontractors, which will stimulate the local economy, and also reduce carbon emissions through shorter travel distances to the site.

Contractors adhere to divert 100% of the waste generated during the project from landfill and prioritise reuse over recycling, where possible, in line with circular economy principles. To help make this easier contractors must conform to waste segregation while onsite. Reuse maximises the value of the product and consumes significantly less energy than recycling.

Contractors must be a Scottish Living Wage accredited employer and adhere to the principles of Fair Work First, which contributes to economic and social sustainability for their employees.



## Sustainable communities

The climate emergency undermines the foundations of good health and deepens inequalities for our most deprived communities. The NHS touches every community in Scotland. We have a responsibility to use our abilities as a large employer, a major buyer, and one of the most recognised brands in the world – an ‘anchor’ organisation – to protect and support our communities’ health in every way that we can.



The Scottish Government mandated NHS Boards to set out an approach to developing an Anchors strategic plan by October 2023, with a particular focus to:

- Maximise local, progressive procurement of goods and services;
- Provide fair work opportunities for new employment and for existing staff;
- Use and/or dispose of your land and assets for the benefit of the local community and local economy; and
- The governance arrangements within the NHS Board to progress your Anchors Strategic Plan.

Prior to the Scottish Government’s mandate, NHSGJ have been exploring the idea and determining the role of the organisation as an anchor institution. Discussions and research took place throughout 2022 following the publication launched by The Health Foundation. This supported NHSGJ’s ambitions to develop and deepen strategic partnerships and supplement long-established effective relationships with the local stakeholders e.g. initiatives with schools, charities, volunteers, and community benefits as a result of the expansion programme.

An Anchor’s Strategic Plan was developed and submitted to Scottish Government, which summarised NHSGJ’s existing anchor activity as well as identifying future activity around the 3 key pillars of anchor work (as listed above). Work is ongoing with relevant departments to synthesise plans and launch an anchor charter by Summer 2024. We are working with a number of partners to enhance our role as an anchor organisation through the following areas:

### Widening access to quality work

The purpose of our employability programme is to ensure we are offering a range of options to employment both within healthcare and as part of a journey to employment in other sectors. Key areas of work include:

#### Working with local colleges and schools to:

- expand the number of work experience and volunteering opportunities at the NHS Golden Jubilee
- deliver STEM events

#### Working with West Dunbartonshire Council employability services to promote NHS Golden Jubilee as a lead employer in the area and offer routes employment for people in the council area including:

- funded placements for long term unemployed people to develop or regain skills and experience and secure employment
- Recruitment events with job centre plus
- Deliver foundation apprenticeships

## Participation in Developing Young Workforce and Young Persons Guarantee Scheme

### Working with Glasgow Science Centre to develop STEM orientated workshops

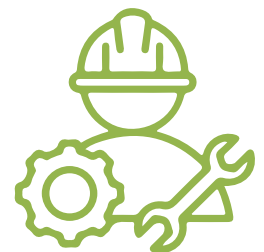
### Providing mentoring by our staff for young people from care-experienced background

### Using buildings and spaces to support communities

- As outlined above we develop access to our greenspace. We will also continue to work with West Dunbartonshire and the local community to maximise opportunities for our site to be part of local assets including:
  - Our grounds and hotel facilities to be used for community events building on successful delivery of local community events including fetes.
  - Offering our hotel facilities as part of warm spaces initiative.
  - Providing facilities for in reach council services for our staff and visitors including local community such as citizen's advice, money advice services and housing services.
  - Providing facilities for third sector organisations to host events and provide support for our staff and visitors including local community.
  - NHS Golden Jubilee has not yet established a green health partnership. However, there are opportunities for us to explore developing a partnership with West Dunbartonshire Council and the West Dunbartonshire Health and Social Care Partnership. Our role in the partnership would be to further develop access to the Greenspace on our site building on the following:
    - Walking, wheeling, running and cycle routes – our Site Masterplan includes options for providing an route between the Queen's Quay and the Beardmore Community Garden at either end of the site to promote active leisure and travel through increasing use of our site for walking, running, wheeling and cycling.
    - Bio-diversity and greenspace enhancement – we have a developed our Garden of Reflection for visitors and staff but there is more potential for landscaping to increase bio-diversity and enhance the greenspace experience of staff and visitors as well as local residents accessing the site.
    - Community projects – building on our exemplary volunteering service we have opportunities to offer volunteering to contribute to gardening and upkeep of existing greenspace and potential to develop community gardens on our site.

## Purchasing more locally and for social benefit

Our Procurement service is already exploring opportunities to promote opportunities for local businesses to tender for contracts. We are also working with West Dunbartonshire Council to promote the community benefits portal hosted by National Services Scotland with our local community to encourage engagement by local community groups with community benefit opportunities with our suppliers. We are engaged with a local company, Haven Products, on a design project to explore development of re-useable headwear to provide a sustainable solution to replacing single use disposable headwear. This will potentially enable local procurement of a new product to the organisation and the wider NHS.



## Working more closely with local partners

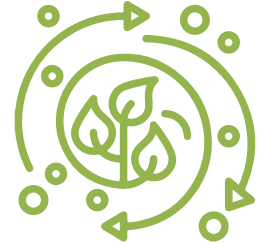
We have links with the local Chamber of Commerce to identify opportunities for working with business and commercial partners locally as outlined above with the design project. We are part of West Dunbartonshire's economic development delivery group to ensure we are sharing ideas and contributing ideas to the wider community development.



## Reducing environmental impact

We are working with West Dunbartonshire Council to ensure our site links into public and active travel development in the area as well as linking into the Queens Quay district heating network.

NHS Golden Jubilee has a limited role in relation to local community resilience including to climate change. However, we will explore as part of organisational resilience plans for adverse weather, our role in providing shelter and support for our local community but this would need to be in line with wider responsibility for resilience and response coordinated by NHS Greater Glasgow & Clyde.



## Summary conclusion

NHS Golden Jubilee continues to make progress, and indeed are leading by example on many key areas. We recognise the impacts of the climate crisis are happening now and know there is a need to accelerate our knowledge and expertise across NHS Golden Jubilee.

The recognition and establishment of a revised governance structure for our sustainability programme cements our commitment and prioritisation to sustainability and NHS Golden Jubilee looks forward to showing our future progress in this vital area of work.



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